

Claims

- 5 1. A method for compensating a data-dependency of a power measurement, the data dependency being caused by linear modulation, the method comprising:

10 performing a first measurement of a transmitted output power;
performing a second measurement of a reflected power, wherein the second measurement is performed time multiplexed from the first measurement;
15 calculating a first average power based on data transmitted during the first measurement;
calculating a second average power based on data transmitted during the second measurement; and
20 compensating at least one of the first measurement and the second measurement based on a difference between the first average power and the second average power.

- 25 2. The method according to claim 1, wherein the first measurement and the second measurement are performed in different bursts.

- 30 3. The method according to claim 2, further comprising compensating at least one of the first measurement and the second measurement also based on a difference in the configured power levels between the different bursts.

- 35 4. The method according to claim 1, wherein the first measurement and the second measurement are performed in a single burst.

5. The method according to claim 1,
wherein the first measurement and the second measurement are
performed within a single user data sequence or within different
user data sequences.

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6. The method according claim 5, wherein the first average
power and the second average power are calculated based on user
data comprised within the single user data sequence or within
the different user data sequences.

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7. The method according to claim 1,
wherein the first measurement and the second measurement are
performed within a single training sequence or within different
training sequences.

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8. The method according to claim 7,
wherein the first average power and the second average power are
calculated based on data comprised within the single training
sequence or within the different training sequences.

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9. The method according to claim 8,
wherein the difference between the first average power and the
second average power is calculated prior to the first measure-
ment and the second measurement and wherein the difference is
stored in a database.

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10. The method according to claim 1
wherein the first measurement and the second measurement are
performed within a single tail bit sequence or within different
tail bit sequences.

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11. The method according to claim 10,
wherein the first average power and the second average power are
calculated based on data comprised within the single tail bit
sequence or within the different tail bit sequences.

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12. The method according to claim 1,
wherein the first measurement and the second measurement are
performed within different types of data sequences.

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13. The method according to claim 1,
wherein the first measurement and the second measurement are
performed before an output port.

10 14. The method according to claim 13,
wherein the output port is an output port of a combining and
distribution unit or an output port of a transceiver unit.

15 15. The method according to claim 13, further comprising calcu-
lating a matching at the output port based on at least one of
the compensated first and second measurements.

20 16. The method according to claim 1,
wherein the first measurement and the second measurement are
performed within a transceiver unit.

25 17. The method according to claim 16,
wherein the first measurement and the second measurement are
performed between a mixer and an amplifier of the transceiver
unit.

18. A computer program product for performing, when the com-
puter program product is run on a computer system, the steps of

30 performing a first measurement of a transmitted output
power;
performing a second measurement of a reflected power,
wherein the second measurement is performed time multi-
plexed from the first measurement;

calculating a first average power based on data transmitted during the first measurement;

calculating a second average power based on data transmitted during the second measurement; and

5 compensating at least one of the first measurement and the second measurement based on a difference between the first average power and the second average power.

10 19. The computer program product of claim 18, stored on a computer-readable recording medium.

20. A device for compensating a data-dependency of a power measurement comprising:

15 a modulator for linearly modulating a data signal;
a measurement unit for performing a first measurement of a transmitted output power and a second measurement of a reflected power, wherein the second measurement is performed time multiplexed from said first measurement;

20 a first calculating unit for calculating a first average power based on data transmitted during the first measurement and a second average power based on data transmitted during the second measurement; and

25 a compensating unit for compensating at least one of the first measurement and second measurement based on a difference between the first average power and the second average power.

30 21. The device according to claim 20,
further comprising a database for storing timing events relating to the first measurement and the second measurement.

22. The device according to claim 20,
further comprising a second calculating unit for calculating a
35 voltage standing wave ratio.

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23. A device for compensating a data-dependency of a power measurement comprising:

5 a modulator for linearly modulating a data signal;
a measurement unit for performing a first measurement of a transmitted output power and a second measurement of a reflected power, wherein the second measurement is performed time multiplexed from said first measurement;

10 a first database for storing a difference between a first average power calculated based on data transmitted during the first measurement and a second average power calculated based on data transmitted during the second measurement;
and

15 a compensating unit for compensating at least one of the first measurement and second measurement based on the difference between the first average power ($P_{out,calc1}$) and the second average power.

20 24. The device according to claim 23,
further comprising a second database for storing timing events relating to the first measurement and the second measurement.

25. The device according to claim 23,

25 further comprising a calculating unit for calculating a voltage standing wave ratio.

26. A base transceiver station for a wireless communication system, comprising

30 a modulator for linearly modulating a data signal;
a measurement unit for performing a first measurement of a transmitted output power and a second measurement of a reflected power, wherein the second measurement is performed time multiplexed from said first measurement;
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a unit which provides power information relating to a first average power determined based on data transmitting during the first measurement and a second average power determined based on data transmitted during the second measurement;
5 and

a compensating unit for compensating at least one of the first measurement and the second measurement based on a difference between the first average power and the second average power, wherein the difference is determined based
10 on the power information.

27. A method for compensating a data-dependency of a power measurement, comprising:

15 linearly modulating and amplifying an input signal to provide an output signal;
performing a first measurement of a transmitted output power of the output signal with a measurement unit;
performing a second measurement of a reflected power of the
20 output signal, wherein the second measurement is performed time multiplexed from the first measurement by the same measurement unit which performed the first measurement;
determining a first average power based on data comprised within the output signal and transmitted during the first
25 measurement;
determining a second average power based on data comprised within the output signal and transmitted during the second measurement;
determining a power difference between the first average
30 power and the second average power; and
compensating at least one of the first measurement and the second measurement based on the power difference.